

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
18 August 2005 (18.08.2005)

PCT

(10) International Publication Number
WO 2005/074637 A2

(51) International Patent Classification: Not classified

(21) International Application Number:
PCT/US2005/003429

(22) International Filing Date: 28 January 2005 (28.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/540,612 30 January 2004 (30.01.2004) US

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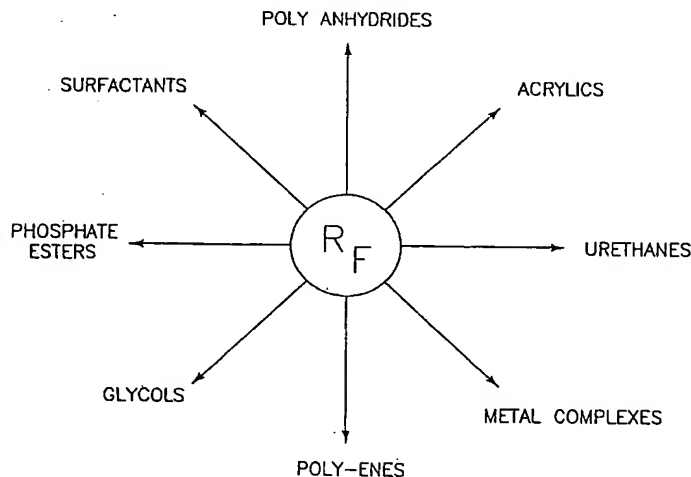
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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

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(54) Title: PRODUCTION PROCESSES AND SYSTEMS, COMPOSITIONS, SURFACTANTS, MONOMER UNITS, METAL COMPLEXES, PHOSPHATE ESTERS, GLYCOLS, AQUEOUS FILM FORMING FOAMS, AND FOAM STABILIZERS



(57) Abstract: Production processes and systems are provided that include reacting halogenated compounds, dehalogenating compounds, reacting alcohols, reacting olefins and a saturated compounds, reacting reactants having at least two -CF₃ groups with reactants having cyclic groups. R_F-compositions such as R_F-intermediates, R_F-surfactants, R_F-monomers, R_F-monomer units, R_F-metal complexes, R_F-phosphate esters, R_F-glycols, R_F-urethanes, and/or R_F-foam stabilizers. The R_F portion can include at least two -CF₃ groups, at least three -CF₃ groups, and/or at least two -CF₃ groups and at least two -CH₂- groups. Detergents, emulsifiers, paints, adhesives, inks, wetting agents, foamers, and defoamers including the R_F-surfactant composition are provided. Acrylics, resins, and polymers are provided that include a R_F-monomer unit. Compositions are provided that include a substrate having a R_F-composition thereover. Aqueous Film Forming Foam ("AFFF") formulations are provided that can include R_F-surfactants and/or R_F-foam stabilizers are provided.

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(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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— of inventorship (Rule 4.17(iv)) for US only

Published:

— without international search report and to be republished upon receipt of that report

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